

CLAIMS

We claim:

- Sukla*
1. An insulated bond wire comprising:
 - 2 a bond wire;
 - 3 an insulating material coating said bond wire; and
 - 4 a first end of said bond wire connected to a bond pad.
 - 1 2. The insulated bond wire of claim 1 wherein said bond wire material is selected from a group including gold, silver, aluminum, and copper.
 - 1 3. The insulated bond wire of claim 1 wherein said insulating material is comprised of a polymer.
 - 1 4. The insulated bond wire of claim 1 wherein the thickness of said insulating material on said bond wire is in the range of approximately 0.2 micrometers to 0.6 micrometers.
 - 1 5. The insulated bond wire of claim 1 wherein said bond wire is connected to said bond pad through an ultrasonic bond.
 - 1 6. The insulated bond wire of claim 1 further comprising said bond pad connected to an integrated circuit.
 - 1 7. The insulated bond wire of claim 1 further comprising said bond pad connected to a substrate.

Class)
8. A pair of bond wires comprising:
1 a first bond wire;
2 an insulating material coating said first bond wire;
3 a first end of said first bond wire connected to a bond pad; and
4 a second bond wire crossing said first bond wire.

9. The pair of bond wires of claim 8 further comprising an insulating material coating
1 said second bond wire.

10. The pair of bond wires of claim 8 wherein said first bond wire touches said second
2 bond wire.

11. An integrated circuit assembly comprising:
1 an integrated circuit;
2 a substrate;
3 a bond wire connected to said integrated circuit and said substrate; and
4 an insulating material coating said bond wire.

Suitability)
12. The integrated circuit assembly of claim 11 wherein said substrate is selected
2 from a group including printable circuit boards, aluminum lead frames, and fine pitch
3 arrays.

13. The integrated circuit assembly of claim 11 wherein said insulating material is
2 comprised of a polymer.

514A5
14. The integrated circuit assembly of claim 11 wherein said bond wire material is
2 selected from a group including gold, silver, aluminum, and copper.

514A5
15. An integrated circuit assembly comprising:
2 a first integrated circuit;
3 a second integrated circuit;
4 a bond wire connected to said first integrated circuit and said second integrated
5 circuit; and
6 an insulating material coating said bond wire.

514A5
16. The integrated circuit assembly of claim 15 wherein said substrate is selected from
2 a group including printable circuit boards, aluminum lead frames, and fine pitch ball grid
3 arrays.

514A5
17. The integrated circuit assembly of claim 15 wherein said insulating material is
2 comprised of a polymer.

514A5
18. The integrated circuit assembly of claim 15 wherein said bond wire material is
2 selected from a group including gold, silver, aluminum, and copper.

514A5
19. A method of connecting a bond wire to a bond pad comprising:
2 providing a bond wire;
3 coating an insulating material to said bond wire; and
4 connecting a first end of said bond wire to a bond pad.

1 20. The method of claim 19 further comprising removing said insulating material from
2 said first end of said bond wire.

1 21. The method of claim 19 wherein said connecting an insulating material to said
2 bond wire comprises:

3 coating said bond wire in liquid insulating material; and
4 curing said liquid insulating material on said bond wire.

1 22. The method of claim 19 wherein said connecting an insulating material to said
2 bond wire comprises:

3 coating said bond wire in liquid insulating material; and
4 cooling said liquid insulating material on said bond wire.
{

1 23. The method of claim 20 wherein said insulating material is removed from said first
2 end of said bond wire by vaporization.

1 24. The method of claim 20 wherein said insulating material is removed from said first
2 end of said bond wire by stripping.

1 25. The method of claim 20 wherein said insulating material is removed from a first
2 end of said bond wire by dissolving said insulating material off said first end of said bond
3 wire with a solvent.

1 26. The method of claim 21 further comprising drying said coated insulating material.

27. The method of claim 22 further comprising drying said coated insulating material.